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***AMENDMENTS TO THE DRAWINGS***

***In the Drawings:***

Please add new drawing sheets FIG. 12 and FIG. 13 as attached herewith on separate sheets.

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### ***REMARKS***

This is a full and timely response to the outstanding Office action mailed July 1, 2005. Upon entry of the amendments in this response claims 1-43 are pending. More specifically, claims 1, 5, 9, 10, 16, 20, 22, and 33 are amended. These amendments are specifically described hereinafter.

#### **I. Present Status of Patent Application**

Claims 1-8, 20, 21, 33-36 and 39-43 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Teraoka (U.S. Patent No. 6,292,836). Claims 1-8 are rejected for similar reasons. Claim 9 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over by Rao (U.S. Patent No. 6,789,9118) in view of Teraoka (U.S. Patent No. 6,292,836). Claim 10 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Rao (U.S. Patent No. 6,789,118) in view of Brandt *et al.* (U.S. Patent No. 6,377,993). Claims 11-19 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Rao and Teraoka and in view of Hegde (U.S. Patent No. 6,570,875). Claims 22-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tokuyo *et al.* (U.S. Patent No. 6,829,238) in view of Rao (U.S. Patent No. 6,789,118). Claims 25-32 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tokuyo and Rao in view of Teraoka (U.S. Patent No. 6,292,836). Claims 29-32 are rejected for similar reasons. Claims 37 and 38 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Teraoka in view of Rao (U.S. Patent No. 6,789,118). These rejections they are respectfully traversed.

#### **II. Rejections Under 37 CFR §1.83(a)**

FIG.s 12 and 13 have been added and the specification has been amended to comply with 37 CFR §1.83(a). Applicants respectfully assert that no new matter is added. The subject matter of the new figures and the specification amendments is included in claims 9, 22, and 28 as originally filed.

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### III. Rejections Under 35 U.S.C. §102(e)

#### A. Claims 20, 21, 33-36, and 39-43

The Office Action rejects claims 20, 21, 33-36, and 39-43 under 35 U.S.C. § 102(e) as allegedly being anticipated by *Teraoka* (U.S. Patent No. 6,292,836). For the reasons set forth below, Applicants respectfully traverse the rejection.

**Independent claim 33 as amended recites:**

33. An apparatus in a digital network that receives a plurality of transport streams, the apparatus comprising:

*a port adapted to receive the plurality of transport streams, wherein each transport stream of the plurality of transport streams has a transport stream identifier associated therewith; and*

*a processor in communication with the port, the processor adapted to monitor the transport stream identifier and respond to changes thereto by generating a network message.*

For a proper rejection of a claim under 35 U.S.C. §102, the cited reference must disclose, teach, or suggest all elements/features/steps of the claim at issue. *See, e.g., E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 7 U.S.P.Q.2d 1129 (Fed. Cir. 1988).

Applicants respectfully submit that independent claim 33 as amended is allowable for at least the reason that *Teraoka* does not disclose, teach, or suggest at least **a port adapted to receive the plurality of transport streams, wherein each transport stream of the plurality of transport streams has a transport stream identifier associated therewith**. The Office Action alleges that *Teraoka* discloses a transport stream identifier. Even if *Teraoka* discloses IP addresses, a virtual TCP connection, and a virtual Internet Protocol identifier, it fails to disclose receiving of a plurality of transport streams wherein each transport stream has a transport stream identifier associated with it. Even if, in *Teraoka*, the end points and paths of a transmission are identified, a transport stream identifier identifies a particular stream of content between devices

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or transmission points, thus enabling the discernment of different content on the same path between the same devices. Therefore, *Teraoka* does not anticipate independent claim 33, and the rejection should be withdrawn.

In the previous Amendment and Response to Office Action, a typographical error occurred on the last line of page 18. The statement should have read, "*Teraoka* does *not* disclose identifying a particular stream of data." Applicants thank the Examiner for identifying this error and respectfully submit that this omission is obvious from the accompanying arguments and from other statements of the Response. "However, this does not disclose assigning identifiers to individual transport streams. Neither *Rao* nor *Teraoka* corrects this omission." See *Response*, page 24, first paragraph. Therefore, unless any subsequent Office Action directly addresses this issue, the obvious error should be considered acknowledged as an error, and the previously entered statement should be considered corrected.

Nonetheless, even if the error is not deemed acknowledged, the statement does not render claim 33 unallowable. The statement did not include the language from the claim, and, therefore, Applicants have not stated that the reference anticipates claim 33. Additionally, even if the statement is interpreted as stated, Applicants respectfully submit that it would need to be interpreted in context, i.e., as the Office Action stated with a single transmitter and receiver, which the claim language now renders a moot issue.

Because independent claim 33 as amended is allowable over the cited art of record, dependent claims 20, 21, 34-36, and 39-43 (which depend from independent claim 33) are allowable as a matter of law for at least the reason that dependent claims 20, 21, 34-36, and 39-43 contain all the steps/features of independent claim 33. See *Minnesota Mining and Manufacturing Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002) *Jeneric/Pentron, Inc. v. Dillon Co.*, 205 F.3d 1377, 54 U.S.P.Q.2d 1086 (Fed. Cir. 2000); *Wahpeton Canvas Co. v. Frontier Inc.*, 870 F.2d 1546, 10 U.S.P.Q.2d 1201 (Fed. Cir. 1989). Therefore, since dependent claims 20, 21, 34-36, and 39-43 are patentable over *Teraoka*, the rejection to claims 20, 21, 34-36, and 39-43 should be withdrawn and the claims allowed.

Additionally and notwithstanding the foregoing reasons for allowability of independent claim 33, dependent claims 20, 21, 34-36, and 39-43 recite further features and/or combinations

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of features, as are apparent by examination of the claims themselves, that are patently distinct from the cited art of record. Hence there are other reasons why dependent claims 20, 21, 34-36, and 39-43 are allowable.

**B. Claims 1-8**

The Office Action rejects claims 1-8 under 35 U.S.C. § 102(e) as allegedly being anticipated by *Teraoka* (U.S. Patent No. 6,292,836). For the reasons set forth below, Applicants respectfully traverse the rejection.

**Independent claim 1 as amended recites:**

1. A system for discovering and mapping a digital network, the system comprising:  
a controller adapted to generate a transport stream map in response to received network messages; and  
***a plurality of devices in communication with the controller, each of the devices adapted to receive a plurality of transport streams with transport stream identifiers, monitor the received transport streams, and respond to changes in the received transport streams by generating a network message and sending the network message to the controller.***

For a proper rejection of a claim under 35 U.S.C. §102, the cited reference must disclose, teach, or suggest all elements/features/steps of the claim at issue.

Applicants respectfully submit that independent claim 1 as amended is allowable for at least the reason that *Teraoka* does not disclose, teach, or suggest at least a **plurality of devices in communication with the controller, each of the devices adapted to receive a plurality of transport streams with transport stream identifiers, monitor the received transport streams, and respond to changes in the received transport streams**. The Office Action alleges that *Teraoka* discloses a transport stream identifier. Even if *Teraoka* discloses IP addresses, a virtual TCP connection, and a virtual Internet Protocol identifier, it fails to disclose a receiver of a plurality of transport streams wherein each transport stream has a transport stream identifier

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associated with it. Even if, in *Teraoka*, the end points and paths of a transmission are identified, a transport stream identifier identifies a particular stream of content between devices or transmission points, thus enabling the discernment of different content on the same path between the same devices. Therefore, *Teraoka* does not anticipate independent claim 1, and the rejection should be withdrawn.

Because independent claim 1 as amended is allowable over the cited art of record, dependent claims 2-8 (which depend from independent claim 1) are allowable as a matter of law for at least the reason that dependent claims 2-8 contain all the steps/features of independent claim 1. Therefore, since dependent claims 2-8 are patentable over *Teraoka*, the rejection to claims 2-8 should be withdrawn and the claims allowed.

Additionally and notwithstanding the foregoing reasons for allowability of independent claim 1, dependent claims 2-8 recite further features and/or combinations of features, as are apparent by examination of the claims themselves, that are patently distinct from the cited art of record. Hence there are other reasons why dependent claims 2-8 are allowable.

#### IV. Rejections Under 35 U.S.C. §103(a)

##### A. Claims 9 and 11-19

The Office Action rejects claim 9 under 35 U.S.C. §103(a) as allegedly being unpatentable over by *Rao* (U.S. Patent No. 6,789,9118) in view of *Teraoka* (U.S. Patent No. 6,292,836). Claims 11-19 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Rao* and *Teraoka* in view of *Hegde* (U.S. Patent No. 6,570,875). For the reasons set forth below, Applicants respectfully traverse the rejection.

**Independent claim 9 as amended recites:**

9. A method of mapping a digital network that includes a plurality of devices that receive and transmit a plurality of transport streams, the method comprising the steps of: grouping multiple devices of the plurality of devices into a plurality of tiers within the digital network; and

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***associating a first particular device of a first tier with a second particular device of a second tier of the digital network, wherein the second particular device receives a plurality of transport streams, each with a corresponding unique transport stream ID transmitted from the first particular device.***

For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of references must disclose, teach, or suggest all elements/features/steps of the claim at issue. *See, e.g., In re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981). Applicants respectfully submit that independent claim 9 is allowable for at least the reason that the combination of *Rao* and *Teraoka*, does not disclose, teach, or suggest at least **associating a first particular device of a first tier with a second particular device of a second tier of the digital network, wherein the second particular device receives a plurality of transport streams, each with a corresponding unique transport stream ID transmitted from the first particular device.** The Office Action alleges that *Teraoka* discloses a transport stream identifier. Even if *Teraoka* discloses IP addresses, a virtual TCP connection, and a virtual Internet Protocol identifier, it fails to disclose a receiver of a plurality of transport streams wherein each transport stream has a transport stream identifier associated with it. Even if, in *Teraoka*, the end points and paths of a transmission are identified, a transport stream identifier identifies a particular stream of content between devices or transmission points, thus enabling the discernment of different content on the same path between the same devices.

As shown above, the cited combination of references does not disclose, teach, or suggest, either implicitly or explicitly, all the elements of claim 9. Therefore, the rejection should be withdrawn. Additionally and notwithstanding the analysis hereinabove, there are other reasons why claim 9 is allowable.

Because independent claim 9 is allowable over the cited art of record, dependent claims 11-19 (which depend from independent claim 9) are allowable as a matter of law for at least the reason that dependent claims 11-19 contain all the steps/features of independent claim 9. Therefore, the rejection to claims 11-19 should be withdrawn and the claims allowed.

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Additionally and notwithstanding the foregoing reasons for allowability of independent claim 9, dependent claims 11-19 recite further features and/or combinations of features, as are apparent by examination of the claims themselves, that are patently distinct from the cited art of record. Hence there are other reasons why dependent claims 11-19 are allowable.

Additionally, with regard to the rejection of claims 11-19, *Hegde* does not make up for the deficiencies of *Rao* and *Teraoka* noted above. Therefore, claims 11-19 are considered patentable over any combination of these documents.

**B. Claim 10**

The Office Action rejects claim 10 under 35 U.S.C. §103(a) as allegedly being unpatentable over *Rao* (U.S. Patent No. 6,789,118) in view of *Brandt* (U.S. Patent No. 6,377,993). For the reasons set forth below, Applicants respectfully traverse the rejection.

**Independent claim 10** as amended recites:

10. A method of mapping a digital network that includes a plurality of devices that receive and transmit a plurality of transport streams, the method comprising the steps of:  
grouping multiple devices of the plurality of devices into a plurality of tiers within the digital network, the plurality of tiers including a source tier, an intermediate tier, and an output tier; and  
associating a first particular device of a first tier with a second particular device of a second tier of the digital network, *wherein the second particular device receives a plurality of transport streams with transport stream identifiers transmitted from the first particular device.*

For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of references must disclose, teach, or suggest all elements/features/steps of the claim at issue. Applicants respectfully submit that independent claim 10 as amended is allowable for at least the reason that the combination of *Rao* and *Brandt* does not disclose, teach, or suggest at least **wherein the**



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**second particular device receives a plurality of transport streams with transport stream identifiers transmitted from the first particular device.**

As the cited combination of references does not disclose, teach, or suggest, either implicitly or explicitly, all the elements of claim 10, the rejection should be withdrawn. Additionally and notwithstanding the analysis hereinabove, there are other reasons why claim 10 is allowable.

**C. Claims 22-32**

The Office Action rejects claims 22-24 under 35 U.S.C. §103(a) as allegedly being unpatentable over *Tokuyo* (U.S. Patent No. 6,829,238) in view of *Rao* (U.S. Patent No. 6,789,118). Claims 25-32 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Tokuyo* and *Rao* in view of *Teraoka* (U.S. Patent No. 6,292,836). Claims 29-32 are rejected for similar reasons. For the reasons set forth below, Applicants respectfully traverse the rejection.

**Independent claim 22 as amended recites:**

22. A method of mapping a digital network, the method comprising:  
***assigning a unique transport stream identifier to each transport stream of a plurality of transport streams***, wherein the plurality of transport streams are transmitted from a plurality of devices included in the digital network and wherein each device of the plurality of devices transmits a plurality of transport streams;  
associating each assigned unique transport stream identifier with a particular device of the plurality of devices, wherein the particular device transmits the transport stream having the unique transport stream identifier assigned thereto;  
transmitting to each device of the plurality each assigned unique transport stream identifier associated therewith;  
receiving a network message from multiple devices of the plurality of devices, each network message including at least one input transport stream identifier; and  
using the multiple network messages to determine a hierarchy of devices for the plurality of devices.

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For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of references must disclose, teach, or suggest all elements/features/steps of the claim at issue. *See, e.g., In re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981). Applicants respectfully submit that independent claim 22 is allowable for at least the reason that the combination of *Tokuyo* and *Rao* does not disclose, teach, or suggest at least **assigning a unique transport stream identifier to each transport stream of a plurality of transport streams**. The Office Action alleges that *Tokuyo* discloses a transport stream identifier. Even if *Tokuyo* discloses TCP connections, IP addresses, handling two TCP connections as a pair, and assigning a unique identification number to the pair, it fails to disclose assigning a unique transport stream identifier to each transport stream of a plurality of transport streams. In *Tokuyo*, only the end points and paths of a transmission are identified. A transport stream identifier identifies the content between devices and on transmission points, but also allows the discernment of different content on the same path between the same devices.

As shown above, the cited combination of references does not disclose, teach, or suggest, either implicitly or explicitly, all the elements of claim 22. Therefore, the rejection should be withdrawn. Additionally and notwithstanding the analysis hereinabove, there are other reasons why claim 22 is allowable.

Because independent claim 22 is allowable over the cited art of record, dependent claims 23-32 (which depend from independent claim 22) are allowable as a matter of law for at least the reason that dependent claims 23-32 contain all the steps/features of independent claim 22. Therefore, the rejection to claims 23-32 should be withdrawn and the claims allowed.

Additionally and notwithstanding the foregoing reasons for allowability of independent claim 22, dependent claims 23-32 recite further features and/or combinations of features, as are apparent by examination of the claims themselves, that are patently distinct from the cited art of record. Hence there are other reasons why dependent claims 23-32 are allowable.

Additionally, with regard to the rejection of claims 23-32, *Teraoka* does not make up for the deficiencies of *Tokuyo* and *Rao* noted above. Therefore, claims 23-32 are considered patentable over any combination of these documents.

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**D. Claims 37 and 38**

The Office Action rejects claims 37 and 38 under 35 U.S.C. §103(a) as allegedly being unpatentable over *Teraoka* as applied to claim 33 above, and in view of *Rao* (U.S. Patent No. 6,789,118). For the reasons set forth below, Applicants respectfully traverse the rejection.

Because independent claim 33 is allowable over the cited art of record, dependent claims 37 and 38 (which depend from independent claim 33) are allowable as a matter of law for at least the reason that dependent claims 37 and 38 contain all the steps/features of independent claim 33. Therefore, the rejection to claims 37 and 38 should be withdrawn and the claims allowed.

Additionally and notwithstanding the foregoing reasons for allowability of independent claim 33, dependent claims 37 and 38 recite further features and/or combinations of features, as are apparent by examination of the claims themselves, that are patently distinct from the cited art of record. Hence there are other reasons why dependent claims 37 and 38 are allowable.

**V. Miscellaneous Issues**

Any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known art and official notice, or statements interpreted similarly, should not be considered well known since the Office Action does not include specific factual findings predicated on sound technical and scientific reasoning to support such conclusions.

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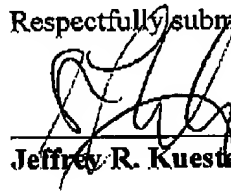
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**CONCLUSION**

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 1-43 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned agent at (770) 933-9500.

Respectfully submitted,



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